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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,884	01/29/2004	Hitoshi Ueda	04070/LH	7303

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EXAMINER	
LE, TUAN H	

ART UNIT	PAPER NUMBER
2622	

MAIL DATE	DELIVERY MODE
03/05/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/768,884	UEDA, HITOSHI	
	Examiner	Art Unit	
	TUAN H. LE	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/30/08*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *22-27* is/are allowed.

6)☒ Claim(s) *1-5,7-12,14-19,21 and 28* is/are rejected.

7)☒ Claim(s) *6,13 and 20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 January 2004* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 11/30/08 have been fully considered but they are not persuasive. The following is the examiner's reasoning.

Regarding independent **claims 1, 8, and 15,** the applicant submits that Michalik (U.S. Pat. 4,519,692) does not disclose determining a contradiction of the time lapse imaging condition set by the time lapse imaging portion according to a predetermined criterion, Remarks, pg. 28, lines 3-6. However, the examiner respectfully disagrees.

Accordingly, Michalik discloses determining a contradiction of the time lapse imaging condition set by the time lapse imaging portion according to a predetermined criterion, (Michalik, column 20 lines 45-46, wherein the contradiction is pointed to the moment at which the lapse time ends and the exposure time starts).

Regarding to **claims 2, 9, and 26,** the applicant submits that Blessinger (U.S. Pat. 5,196,938) does not disclose determining a contradiction of a time lapse imaging condition by using a relation between the exposure time and the imaging interval as a predetermined criterion, Remarks, pg. 28, lines 16-18. However, the examiner respectfully disagrees.

Accordingly, Blessinger discloses determining a contradiction of a time lapse imaging condition by using a relation between the exposure time and the imaging interval as a predetermined criterion (Blessinger, Fig. 3E and column 6 lines 1-7, wherein the contradiction is generated by the conflict between the frame rate and exposure time). More specifically, Blessinger indicates the conflict between the frame

rate of 1000 frames per second and the exposure time of (1/250) second. With given frame rate, the derived imaging interval is (1/1000) second. Therefore, imaging is impossible when exposure time is (1/250) second and imaging interval is (1/1000) second; exposure time is longer than the imaging interval.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 8, 14, 15, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Michalik (U.S. Pat. 4,519,692).

Regarding **claims 1, 8, and 15**, Michalik discloses an image acquiring device (Michalik, Fig. 1, Fig. 2, Fig. 3) for performing time lapse imaging, comprising:

an imaging portion (camera 26) which performs imaging of a subject;

a time lapse imaging condition setting portion (key board 34) which sets a time lapse imaging condition including at least an exposure time and an imaging interval, prior to the imaging of the subject by the imaging portion, (Michalik, Fig. 2, column 6 lines 1-13 and wherein key combination permits manual entry of image interval (keys 84,86,94) and exposure time (keys 88, 94));

a determining portion (control 40) which determines a contradiction (lapse time ends and exposure starts) of the time lapse imaging condition set by the time lapse

imaging condition setting portion according to a predetermined criterion (Michalik, Fig. 3, column 20 lines 46-55, wherein exposure starts when lapse time ends); and

a presenting portion (display 36) which presents at least information (remaining time) relating to the contradiction of time lapse imaging condition based on a determined result determined by the determining portion (Michalik, Fig. 3, column 20 lines 46-55, wherein remaining time is displayed).

Regarding **claims 7, 14, 21** Michalik teaches the image acquiring device for performing time lapse imaging according to claim 1. In addition, Michalik teaches the imaging portion includes an imaging portion of a microscopic image acquiring device, (Michalik, Fig. 2, wherein camera portion 26 is associated with a microscope).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 9, 16, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michalik (U.S. Pat. 4,519,692) and further in view of Blessinger (U.S. Pat. 5,196,938)

Regarding **claims 2, 9, 16** Michalik teaches the image acquiring device of claim 1,8,15. Michalik does not disclose that the determining portion determines the

contradiction of the time lapse imaging condition by using a relation between the exposure time and the imaging interval as the predetermined criterion.

However, Blessinger discloses that the determining portion determines the contradiction of the time lapse imaging condition by using a relation between the exposure time and the imaging interval as the predetermined criterion (Blessinger, FIG. 3E and column 6 lines 1-7, wherein exposure time is greater than imaging interval).

Therefore, it would have been obvious to an artisan to implement the contradiction as described by Blessinger into the image acquiring device as described by Michalik such that user can select an exposure time and imaging interval which are compatible because such implementation eliminates motion blur of a captured frame (Blessinger, column 2 lines 29-30).

Regarding **claim 28**, Michalik discloses an apparatus for microscopic time lapse imaging (Michalik, Fig. 1, Fig. 2, Fig. 3), comprising:

a camera unit (camera 26), including an imager, attached to a microscope;

a presenting portion (display 36) for presenting information; and

an operation controller (control 40) configured to control operation of the camera unit based on conditions, including at least an exposure time and an interval time (Michalik, Fig. 3, column 20 lines 46-55, wherein exposure starts when lapse time ends), inputted by a user (Michalik, Fig. 2, column 6 lines 1-13 and wherein key combination permits manual entry of image interval (keys 84,86,94) and exposure time (keys 88, 94)),

However, Michalik does not disclose

the controller judges a relationship between the exposure time and the interval time, and controls the presenting portion to present an error dialog when the relationship does not satisfy a predetermined condition; and

the error dialog includes an error avoiding condition which includes changing a gain in the imager.

On the other hand, Blessinger discloses

the controller judges a relationship between the exposure time and the interval time, and controls the presenting portion to present an error dialog when the relationship does not satisfy a predetermined condition (Blessinger, Fig. 3E and column 6 lines 1-5, wherein "invalid parameter combination" is shown when exposure time is greater than image interval); and

the error dialog includes an error avoiding condition which includes changing a gain in the imager (Blessinger, Fig. 3E and column 6 lines 1-5, wherein an users needs to reselect an exposure time and an image interval).

Therefore, it would have been obvious to an artisan to implement the relationship judgement as described by Blessinger into the image acquiring device as described by Michalik such that user can select an exposure time and imaging interval which are compatible because such implementation eliminates motion blur of a captured frame (Blessinger, column 2 lines 29-30).

Claims 3-4, 10-12, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michalik (U.S. Pat. 4,519,692) and further in view of Blessinger (U.S. Pat. 5,196,938) and Schinner (U.S. Pub. 2003/0197795)

Regarding **claims 3, 10, 17** Michalik and Blessinger teach the image acquiring device of claim 2, 9, 16. Michalik and Blessinger do not teach

an avoiding condition generating portion which generates a plurality of time lapse imaging conditions for avoiding the contradiction of the time lapse imaging condition based on the determined result determined by the determining portion, and causes information relating to the plurality of time lapse imaging conditions to be represented by the presenting portion;

a selecting portion which selects one of the plurality of time lapse imaging conditions from the information relating to the plurality of time lapse imaging conditions presented by the presenting portion; and

an instructing portion which instructs the imaging portion to execute time lapse imaging based on the time lapse imaging condition selected by the selecting portion.

However, Schinner discloses

an avoiding condition generating portion (microprocessor 36) which generates a plurality of time lapse imaging conditions for avoiding the contradiction of the time lapse imaging condition based on the determined result determined by the determining portion, and causes information relating to the plurality of time lapse imaging conditions to be presented by the presenting portion (LCD 46), (Schinner, Fig. 1 and paragraph [0040], wherein manual and automatic gain control is performed);

a selecting portion (inherent part) which selects one of the plurality time lapse imaging conditions from the information relating to the plurality of time lapse imaging conditions presented by the presenting portion (Schinner, Fig. 1 and paragraph [0040],

wherein the digital camera prompts user to either manually or automatically control gain)

an instructing portion (capture 34) which instructs the imaging portion to execute time lapse imaging based on the time lapse imaging condition selected by the selecting portion (Schinner, Fig. 1, wherein capture 34 is used to capture images).

Therefore, it would have been obvious to an artisan to combine the avoiding condition generating portion, the selecting portion, and the instructing portion as described by Schinner with the image acquiring device as described by Michalik and Blessinger such that user can select one of time lapse imaging condition for image capturing because such combination balances the conflicting needs of stopping subject motion and capturing sufficient light for an appropriately bright image.

Regarding **claims 4, 11, 18**, Michalik, Blessinger, and Schinner teach the image acquiring device of claim 3, 10, 17. In addition, Michalik discloses

an exposure time setting portion (control 40) which sets the exposure time set by the time lapse imaging condition setting portion to the imaging portion, (Michalik, Fig. 3, wherein entered exposure time is used for image capturing); and

Schinner discloses

a gain setting portion (52,60,62) which enables setting of gain of an output signal from the imaging portion, wherein, when the determining portion determines as the contradiction that the exposure time is longer than the imaging interval, the plurality of time lapse imaging conditions generated by the avoiding condition generating portion include a time lapse imaging condition according to which the instructing portion

instructs the image capturing device to change a value of the exposure time set by the exposure time setting portion to be shorter than the imaging interval, and to set a value of the gain set by the gain setting portion based on a value determined from a ratio of the exposure time after the change and the imaging interval, (Schinner, Fig. 2, Fig. 3, wherein when exposure time is too long, image signal is amplified based on the ratio of exposure time).

Regarding **claims 5, 12, 19**, Michalik, Blessinger, and Schinner teach the image acquiring device of claim 3, 10, 17. In addition, Michalik discloses

an exposure time setting portion (control 40) which sets the exposure time set by the time lapse imaging condition setting portion to the imaging portion, (Michalik, Fig. 3, wherein entered exposure time is used for image capturing); and

Schinner discloses

a brightness correcting portion (52,60,62) which enables correction of brightness of an image by correcting an output signal from the imaging portion, wherein, when the determining portion determines as the contradiction the exposure time is longer than the imaging interval, the plurality of time lapse imaging conditions generated by the avoiding condition generating portion include a time lapse imaging condition according to which the instructing portion instructs the image acquiring device to change a value of the exposure time set by the exposure time setting portion to be shorter than the imaging interval, and to set a value for correcting the brightness of the image by the brightness correcting portion based on a value determined from a ratio of the exposure time after

the change and the imaging interval, (Schinner, Fig. 2, Fig. 3, wherein when exposure time is too long, image signal is amplified based on the ratio of exposure time).

Allowable Subject Matter

Claims 6, 13, 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record neither anticipated nor rendered obvious the reset of exposure time in accordance with imaging time and use it in a ratio for gain control and thereafter brightness control. The closest prior art uses the reset exposure time in a ratio of gain control.

Claims 22-23, 24-25, 26-27 are allowed. The prior art of record neither anticipated nor rendered obvious the reset of exposure time in accordance with imaging time and use it in a ratio for gain control and thereafter brightness control. The closest prior art uses the reset exposure time in a ratio of gain control.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Aizaki et al (U.S. Pub. 2003/0016301) discloses a microscope system in which an electronic camera is used to pickup an observation image by a microscope.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

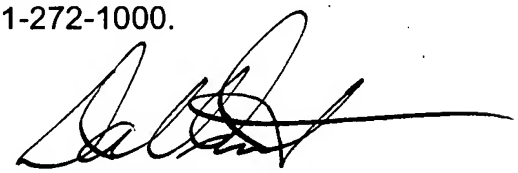
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN H. LE whose telephone number is (571)270-1130. The examiner can normally be reached on M-Th 7:30-5:00 F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tuan Le/



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